

Pennsylvania
Demographic
Outlook

October 2023

Independent Fiscal Office

Independent Fiscal Office
Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17105

717-230-8293 | contact@ifo.state.pa.us | www.ifo.state.pa.us



Staff Acknowledgements

Karen Maynard, Fiscal Analyst III
Michaela Miller, Fiscal Analyst II
Frank Lill, Fiscal Analyst I

- This page intentionally left blank. -



INDEPENDENT FISCAL OFFICE

October 19, 2023

The Honorable Members of the Pennsylvania General Assembly:

Section 604-B (a)(2) of the Administrative Code of 1929 specifies that the Independent Fiscal Office (IFO) shall "provide an assessment of the state's current fiscal condition and a projection of what the fiscal condition will be during the next five years. The assessment shall take into account the state of the economy, demographics, revenues and expenditures." In fulfillment of the demographics obligation, the IFO submits this report to the residents of the Commonwealth and members of the General Assembly. In accordance with the mission of the office, this report does not make any policy recommendations.

Demographic projections presented in this report are from the IFO based on data from the vintage 2020 and 2022 Population Estimates by the U.S. Census Bureau. Various other Census products, data from the U.S. Centers for Disease Control and Prevention and data from the Pennsylvania Department of Health were also used. Other data sources are noted in the relevant sections of this report.

Questions and comments can be submitted to contact@ifo.state.pa.us.

Sincerely,

A handwritten signature in blue ink that reads "Matthew J. Knittel".

Dr. Matthew J. Knittel
Director

- This page intentionally left blank. -

Contents

- Introduction and Methodology 1**
 - Methodology1
- Demographic Trends by Age Group 3**
 - Pennsylvania Population Distribution.....6
 - Dependency Ratios.....7
- Components of Population Change..... 9**
 - Birth Trends.....10
 - Decedent Trends.....11
 - Recent Migration Trends.....13
- Focus: Labor Force Trends Among Older Adults 15**
- Regional and National Population Trends..... 19**
 - Pennsylvania County Population Growth19
 - Population Growth Across States.....20
- Appendix 21**

- This page intentionally left blank. -

Introduction and Methodology

Section 604-B (a)(2) of the Administrative Code of 1929 specifies that the Independent Fiscal Office (IFO) shall “provide an assessment of the state’s current fiscal condition and a projection of what the fiscal condition will be during the next five years. The assessment shall take into account the state of the economy, demographics, revenues and expenditures.” This report fulfills the demographics obligation for the IFO’s release of the *Economic and Budget Outlook for Fiscal Year 2023-24 to 2028-29*.

Demographics are a critical factor that motivate long-term economic, revenue and expenditure trends. Demographics determine key populations, such as the potential labor force that affects economic growth, elementary and secondary students who require educational services and older residents who may require long-term care. All population projections contained in this report are made by the IFO based on data from the U.S. Census Bureau, U.S. Centers for Disease Control and Prevention (CDC) and Pennsylvania Department of Health (DOH). Other data sources are noted in the table footnotes.

Methodology

The IFO demographics forecast uses a cohort-component model in which birth, death and migration rates are projected separately for males and females. Projections are made by single-year ages using data from the U.S. CDC and the U.S. Census Bureau. The base population is as of July 2022 and the forecast is constructed using age group data from the U.S. Census Vintage 2022 Population Estimates.¹ From the base year, the IFO projects birth, death and net migration rates for Pennsylvania residents.² The impacts from the COVID-19 pandemic are detailed in the births, deaths and migration sub-sections that follow.

Births

For 2022, births are based on CDC preliminary data. For 2023, births are informed by preliminary data from DOH and the CDC for trends following the peak of COVID-19. After an increase in births in 2021, preliminary births in the United States declined slightly (-0.1%) from 2021 to 2022.³ Provisional birth data in 2023 suggest a continuation of a modest decline. For 2024 and beyond, birth projections are based on historical birth rates by age group and disregard the years impacted by COVID-19. The projections apply average birth rates to seven groups of females: age 13 to 18, age 19 to 22, age 23 to 29, age 30 to 34, age 35 to 39, age 40 to 44 and age 45 and over. The birth rate forecast assumptions are as follows:

- Age groups 34 years or younger decline slightly and gradually flatten out in the long term.
- Age group 35 to 39 increases slightly over several years, but levels out in the long term.

¹ The U.S. Census population estimates for states only provide single-year age allocations to age 84. However, the U.S. estimates provide single-year allocations to age 99. Therefore, estimates of the Pennsylvania distribution of age 85+ residents were approximated using the U.S. distribution from age 85 to 100+.

² Throughout this report, births, deaths and migration are projected on a fiscal year basis to match the U.S. Census Bureau’s convention of releasing population estimates as of July 1st each year. For display purposes, data represent the year the fiscal year begins (i.e., estimated births for 2022 are estimated births for FY 2022-23).

³ Hamilton, Brady et al., “Vital Statistics Rapid Release,” U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Number 28 (June 2023).

- Age groups 40 and older are assumed to increase in the next few years based on recent historic trends but moderate over the forecast window.

All birth rate trends across various age groups are consistent with the longer-term trend of females having children in later life stages.

Deaths

For 2022, total estimated deaths are from the CDC. The number of deaths was unusually high in CY 2020 and CY 2021 due to the COVID-19 pandemic, and the IFO estimated that the pandemic caused 19,800 excess deaths in CY 2020 and 18,900 in CY 2021.⁴ For 2023, deaths in most states are reverting to pre-pandemic levels, including Pennsylvania.⁵ Based on provisional death counts for the first half of CY 2023, deaths in the Commonwealth are within 3% of counts for the first half of CY 2019.⁶

Currently, it is unclear if those who contracted the virus and recovered will suffer any long-term complications or health impacts, and the death rate forecast does not include any longer-term impact from COVID-19. Consequently, death rates for 2024 to 2030 are based on the most recent three-year pre-pandemic average (2017 to 2019) across various age groups. Projected death rates are then applied to the forecasted population.

Migration

For 2020 and 2021, the U.S. Census Bureau estimates that the COVID-19 pandemic significantly disrupted international migration flows both to and from the United States, resulting in some of the lowest levels of international migration in decades.⁷ Since then, most COVID-19 restrictions have been lifted, but migrant flows have not returned to historical norms. For 2022, total net migration (domestic and international) by individual age is calculated using a four-year average migration rate to reduce the impact of the unusual migrant flows during COVID-19.⁸ Total model net migration is then distributed proportionally between males and females using historical averages. For future years, the forecast applies a (pre-pandemic) long-term migration rate to population projections to determine net migration.

⁴ Independent Fiscal Office, "COVID-19 Impact on Pennsylvania Deaths," February 2022.

⁵ Henderson, Tim, "Death Counts remain high in some states even as COVID fatalities wane," Stateline, August 2023.

⁶ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, "Weekly Provisional Counts of Deaths by State and Select Causes, 2020-2023," September 2023.

⁷ Schachter, Jason et al., "New Population Estimates Show COVID-19 Pandemic Significantly Disrupted Migration Across Borders," United States Census Bureau, December 2021.

⁸ Published data for 2010 through 2019 are based on U.S. Census population estimates, vintage 2020, which do not incorporate the 2020 Decennial Census. As a result, there is a disconnect moving from 2019 to 2020. The analysis used 2020 data from the 2020 Decennial Census to smooth population trends from 2010 through 2019 and computed historical migration trends as the residual population change after deducting actual birth and death data from the U.S. CDC.

Demographic Trends by Age Group

Table 2.1 (next page) presents data and total growth rates for various age cohorts for three 5-year time periods: historical (2015 to 2020); near term (2020 to 2025) and long term (2025 to 2030). Toward the end of the near term, birth, death and migration rates are likely to revert to pre-pandemic trends. However, long-term birth, death or migration rates could change substantially due to changing economic conditions, immigration policies, domestic migration incentives and health care.

Table 2.1 reveals the following trends for the three time periods:

- The total population grew 0.8% from 2015 to 2020 and is projected to remain flat in the near term and then decrease slightly during the long term (-0.2%).
- The school age cohort (age 0 to 19) declined 2.1% from 2015 to 2020 and is projected to decline 3.2% in the near term and then decline 3.5% during the long term.
- The working-age cohort (age 20 to 64) declined 1.2% from 2015 to 2020 and is projected to continue to contract 2.6% in the near term and then decline 1.7% during the long term. In 2025, this group includes mostly Generation X (born 1965 to 1980) and Millennials (born 1981 to 1997) and a portion of Generation Z (born 1998 to 2015).
- The retiree cohort (age 65 to 79) increased 17.5% from 2015 to 2020 and is projected to expand 13.4% in the near term and then 3.4% during the long term. In 2025, this group includes most of the Baby Boom Generation (born 1946 to 1964). The increase in this age cohort and the next age cohort implies strong demand for health care and long-term care services moving forward.
- The advanced age cohort (age 80+) decreased 1.5% from 2015 to 2020 and is projected to expand 8.2% in the near term and then 20.8% during the long term. In 2025, this group mostly includes the Silent Generation (born 1926 to 1945) and a small number from the Greatest Generation (born 1905 to 1925).

The subsections that follow provide further discussion of demographic trends during the near and long terms. Single-year demographic detail through 2030 can be found in the Appendix.

**Table 2.1
Pennsylvania Demographic Trends and Projections**

Age Cohort	Number of Residents (000s)				Total Growth		
	2015	2020	2025	2030	2015-20	2020-25	2025-30
0-4	714	689	657	648	-3.5%	-4.7%	-1.4%
5-9	752	729	701	669	-3.1	-3.8	-4.6
10-14	785	779	739	714	-0.9	-5.1	-3.3
15-19	849	838	840	803	-1.2	0.1	-4.4
20-24	863	817	824	813	-5.3	0.9	-1.3
25-29	858	836	801	820	-2.5	-4.2	2.4
30-34	802	869	847	809	8.3	-2.6	-4.4
35-39	745	818	875	855	9.8	6.9	-2.2
40-44	763	754	818	878	-1.2	8.5	7.3
45-49	848	765	747	814	-9.8	-2.3	8.9
50-54	942	837	746	733	-11.2	-10.8	-1.8
55-59	954	915	805	720	-4.1	-12.1	-10.6
60-64	841	911	863	761	8.4	-5.3	-11.9
65-69	697	784	840	799	12.4	7.2	-5.0
70-74	496	627	702	753	26.3	11.9	7.2
75-79	365	420	534	595	15.1	27.0	11.3
80-84	285	284	331	424	-0.3	16.3	28.3
85-89	203	194	190	227	-4.5	-1.8	19.1
90-94	98	95	94	96	-2.7	-1.6	2.4
95-99	25	28	34	36	13.8	19.3	5.5
100+	4	4	7	9	-0.6	66.1	37.7
Total	12,891	12,994	12,995	12,974	0.8	0.0	-0.2

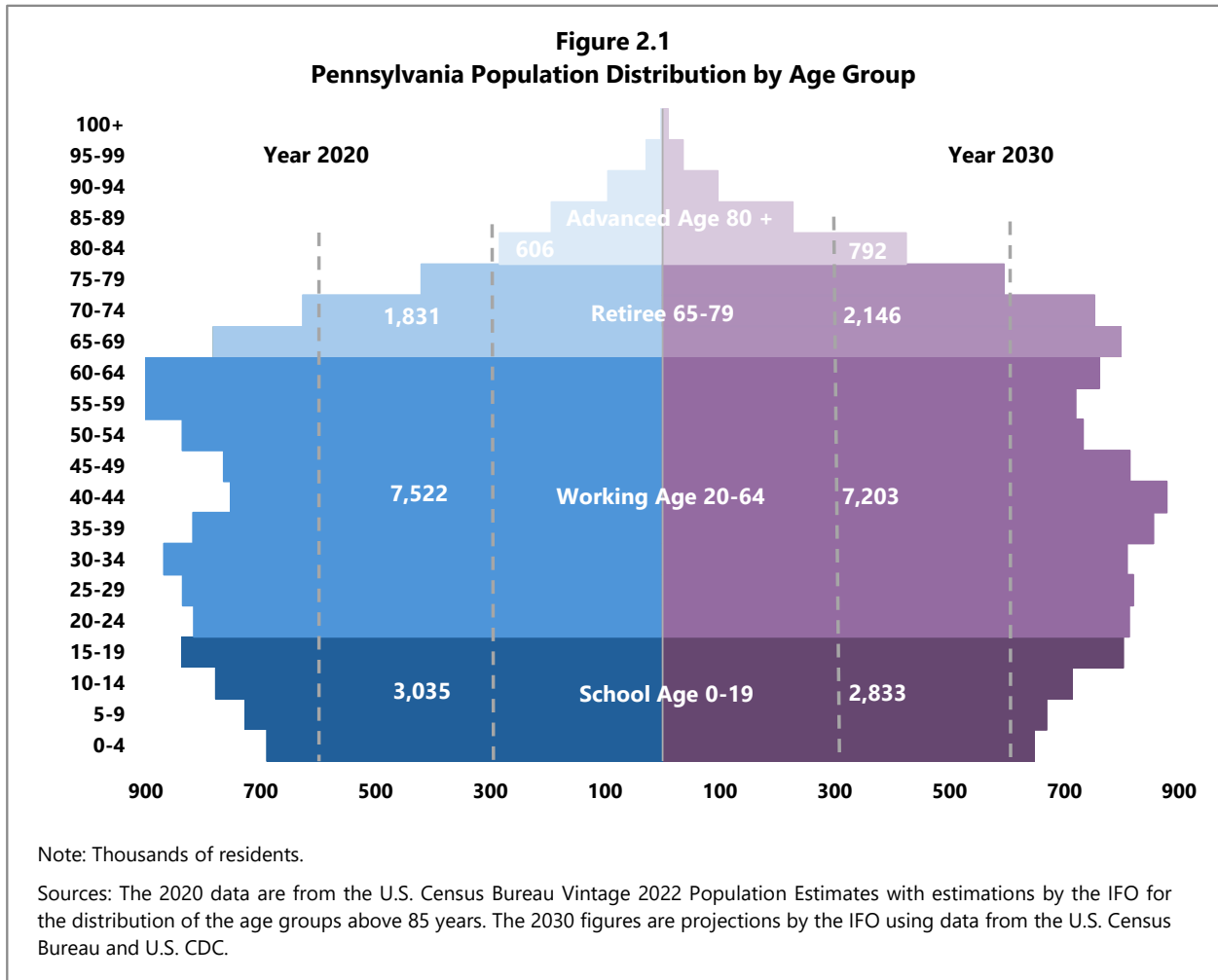
Age Cohort Summary

0-19	3,101	3,035	2,937	2,833	-2.1%	-3.2%	-3.5%
20-64	7,616	7,522	7,326	7,203	-1.2	-2.6	-1.7
65-79	1,559	1,831	2,076	2,146	17.5	13.4	3.4
80+	615	606	656	792	-1.5	8.2	20.8
Total	12,891	12,994	12,995	12,974	0.8	0.0	-0.2

Note: Detail may not sum to total due to rounding.

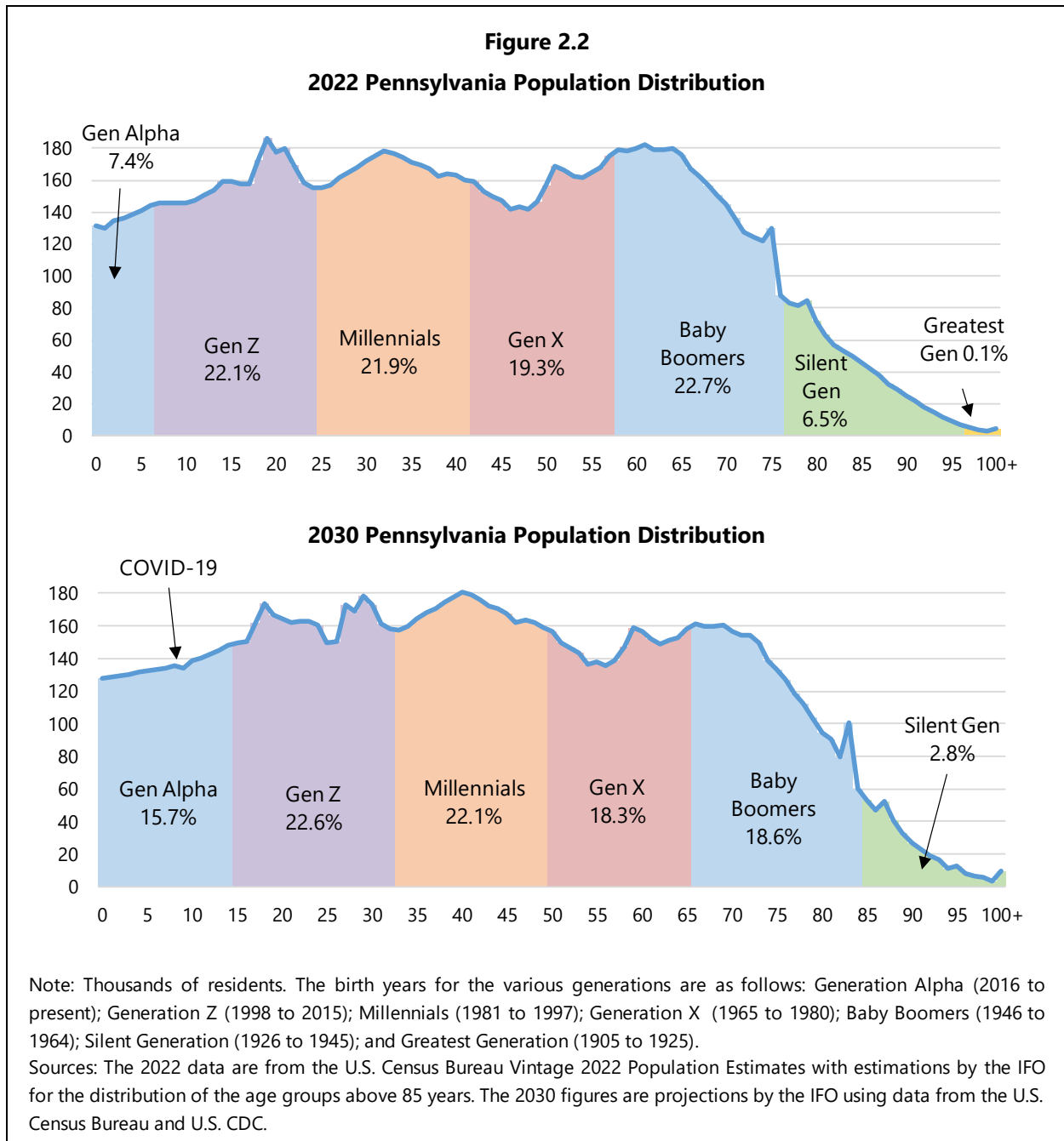
Sources: The 2015 data are estimates by the IFO based on the U.S. Census Bureau Vintage 2020 and 2022 Population Estimates. The 2020 data are from the U.S. Census Bureau Vintage 2022 Population Estimates with estimations by the IFO for the distribution of the age groups above 85 years. 2025 and 2030 are projections by the IFO using data from the U.S. Census Bureau and U.S. CDC.

Figure 2.1 displays the Pennsylvania population distribution for 2020 and 2030 (projected) by age group. By 2030, the School Age 0-19 and Working Age 20-54 cohorts are projected to contract, while the Retiree 65-79 and Advanced Age 80+ cohorts expand.



Pennsylvania Population Distribution

Figure 2.2 displays the Pennsylvania projected population distribution for 2022 and 2030 by generation. The 2022 distribution is shaped by the three largest generations: Baby Boomers (age 56 to 74, 22.7% of total population), Generation Z (age 5 to 22, 22.1%) and Millennials (age 23 to 39, 21.9%). By 2030, Generation Z (22.6%) and Millennials (22.1%) become the largest two generations, while the Baby Boomer share of total state population declines to 18.6%.



Dependency Ratios

Working-age residents remit the majority of state tax revenues that support dependents who attend school and advanced age residents who require dedicated healthcare services. Demographers use two metrics known as dependency ratios to illustrate the relationships between these three groups. The two ratios are the working-age (age 20-64) to youth (age <20) and working-age to retiree (65+) populations. From 2015 to 2030, the working-age to youth ratio is projected to remain stable at 2.5 for Pennsylvania and 2.3 to 2.4 for the U.S. For Pennsylvania, this implies that there are roughly 2.5 working-age adults per youth.

Unlike the working-age to youth ratio, the working-age to retiree ratio is trending downward for both Pennsylvania and the U.S. **Figure 2.3** displays this ratio for Pennsylvania (blue) and the U.S. (purple) for 2015, 2020, 2025 (projected) and 2030 (projected). In 2015, there were 3.5 working-age residents per retiree in Pennsylvania and 4.0 for the U.S. Both ratios declined by 2020 (3.1 for Pennsylvania, 3.5 for the U.S.) and are projected to decline further through 2030 (2.5 for Pennsylvania, 2.7 for the U.S.). The downward trend directly corresponds to the retirement of Baby Boomers and the resulting contraction of the working-age population.

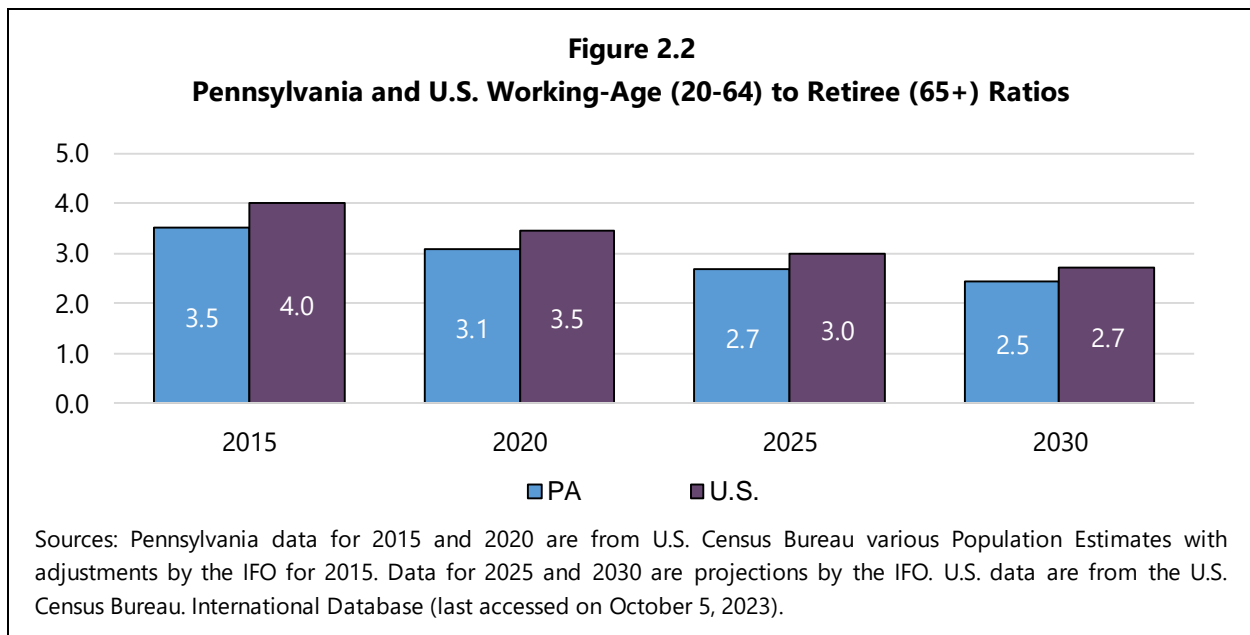


Figure 2.3 illustrates the challenges that policymakers will encounter during the next decade. Over time, there will be relatively fewer working-age residents to support the needs of rapidly expanding retiree and advanced age populations. Stated differently, the burden of support will fall on a smaller group of taxpayers. The actual contraction of the working-age cohort suggests that real per capita tax levels for that age group must increase to keep pace with the anticipated increase in demand for healthcare and other services.

- This page intentionally left blank. -

Components of Population Change

Table 3.1 decomposes the change in state population from 2015 to 2030 to illustrate the factors that motivate low population growth rates. Two factors drive the trends during the 15-year time period:

- The number of births declines while the number of deaths increases. From 2015 to 2020, births outnumbered deaths (organic growth) by 7,000. Deaths are projected to outnumber births by 76,000 from 2020 to 2025 and 111,000 from 2025 to 2030.
- From 2015 to 2020, estimated net migration was 97,000. For 2020 to 2025, the projections assume a reduction to a net inflow of 77,000. Net migration is lower moving forward because the forecast is based on migration patterns from 2018 to 2022, which were notably lower than 2015 to 2020. For 2025 to 2030, net migration is projected to be 91,000 as it reverts to pre-COVID rates.

Table 3.1
Components of Pennsylvania Population Change

	Time Period		
	2015-20	2020-25	2025-30
Start of Period	12,891	12,994	12,995
Natural Increase	7	-76	-111
Births	684	650	638
Deaths	-677	-726	-750
Net Migration	97	77	91
Age 0 to 17	132	110	114
Age 18 to 24	-79	-42	-43
Age 25 to 64	71	25	41
Age 65 to 79	-24	-17	-22
Age 80+	-2	1	1
End of Period	12,994	12,995	12,974
Total Population Gain	103	0	-21

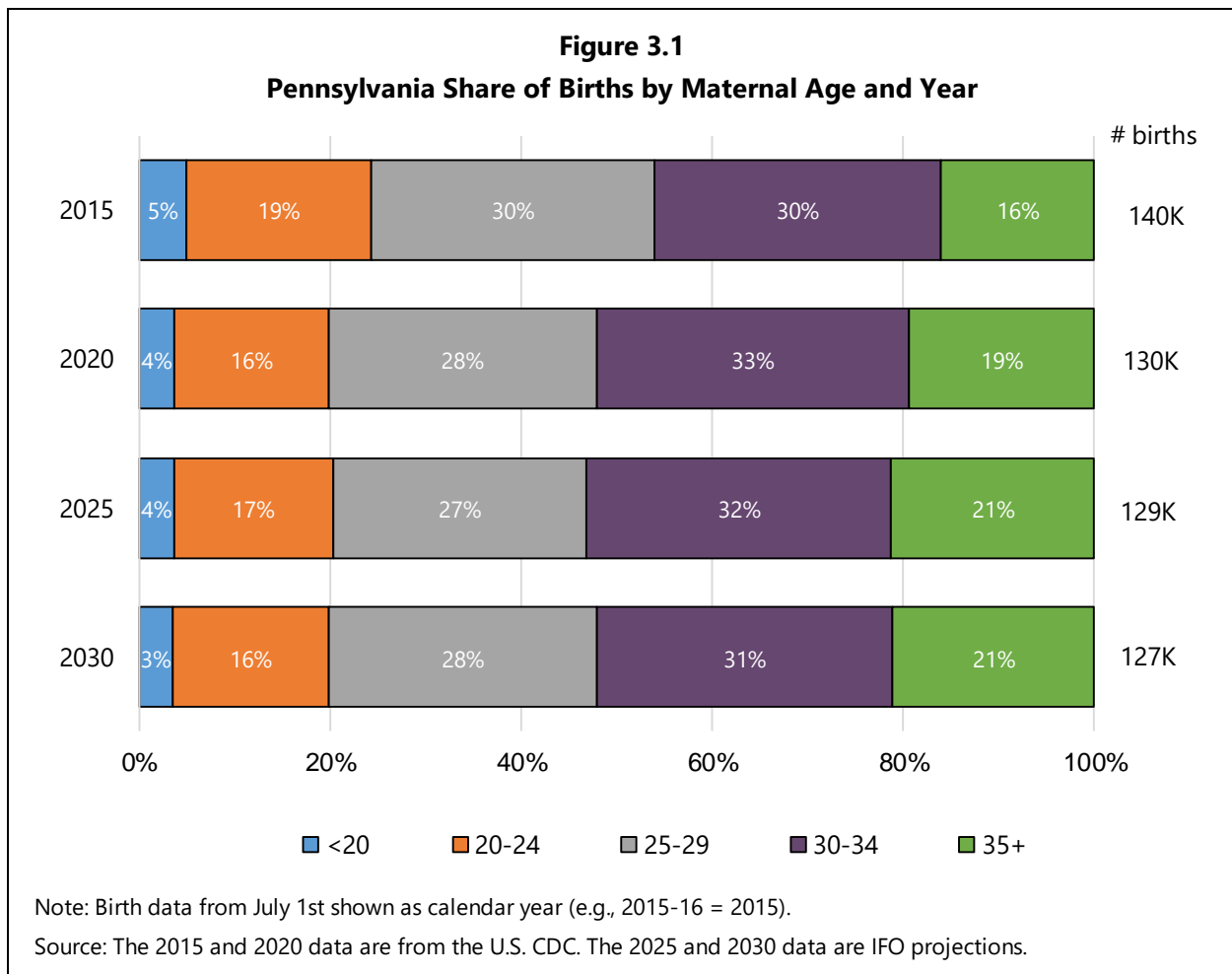
Note: Thousands of residents.

Sources: The 2015 through 2019 data are from the U.S. Census Bureau Vintage 2020 Population Estimates and U.S. CDC with adjustments by the IFO. 2020 through 2022 data are from the U.S. Census Bureau Vintage 2022 Population Projections. 2022 through 2030 data are projections by the IFO using data from the U.S. Census Bureau and U.S. CDC. Calculations by the IFO.

Birth Trends

Figure 3.1 illustrates the gradual decline in the annual number of births from 2015 (140,000) through 2030 (127,000). The decline in births is due to a contraction in younger females of child-bearing age and declining fertility rates among those females. The decline in young female fertility rates is not unique to Pennsylvania. The U.S. CDC reports that birth rates for females age 15 to 24 and 30 to 34 declined from 2021 to 2022, with record low birth rates for females specifically in the 15 to 19 age group.⁹ Reasons for this trend include couples waiting longer to get married and have children, financial concerns among younger adults on whether they can afford to have children, more females wanting to establish a career before having children and more effective birth control methods to prevent unwanted pregnancies.¹⁰

Figure 3.1 separates births based on maternal age group at birth. The gradual increase in births for women age 30 or older (purple and green) and the decline in births for women under age 30 (blue, orange and dark gray) assume current trends continue into the future. The projections also assume that the number of 2023 births will be similar to births in 2022.



⁹ Hamilton, Brady et al., "Vital Statistics Rapid Release," U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Number 28, June 2023.

¹⁰ "Here's Why the Birth Rate Is So Low in the United States," Healthline Parenthood, January 2019.

Table 3.2 displays the share of females by age group giving birth for the same five-year increments as Figure 3.1. For example, in 2015, 9.9% of all Pennsylvania females age 25 to 29 gave birth to a child. From 2015 to 2020, the average maternal age at birth increased from age 28.8 to age 29.6. However, the increase in average maternal age is projected to moderate over time and remain just under age 30.

	2015	2020	2025	2030
Age 13-19	1.2%	0.9%	0.8%	0.8%
Age 20-24	6.4	5.2	5.3	5.2
Age 25-29	9.9	8.9	8.7	8.8
Age 30-34	10.6	10.0	9.9	9.9
Age 35-50	1.8	2.0	2.1	2.0
Total¹	4.6	4.3	4.2	4.1
Average Maternal Age	28.8	29.6	29.7	29.7

Note: Birth data from July 1st shown as calendar year (e.g., 2015-16 = 2015).

¹ The total is the share of females age 13 to 50 giving birth in a given year.

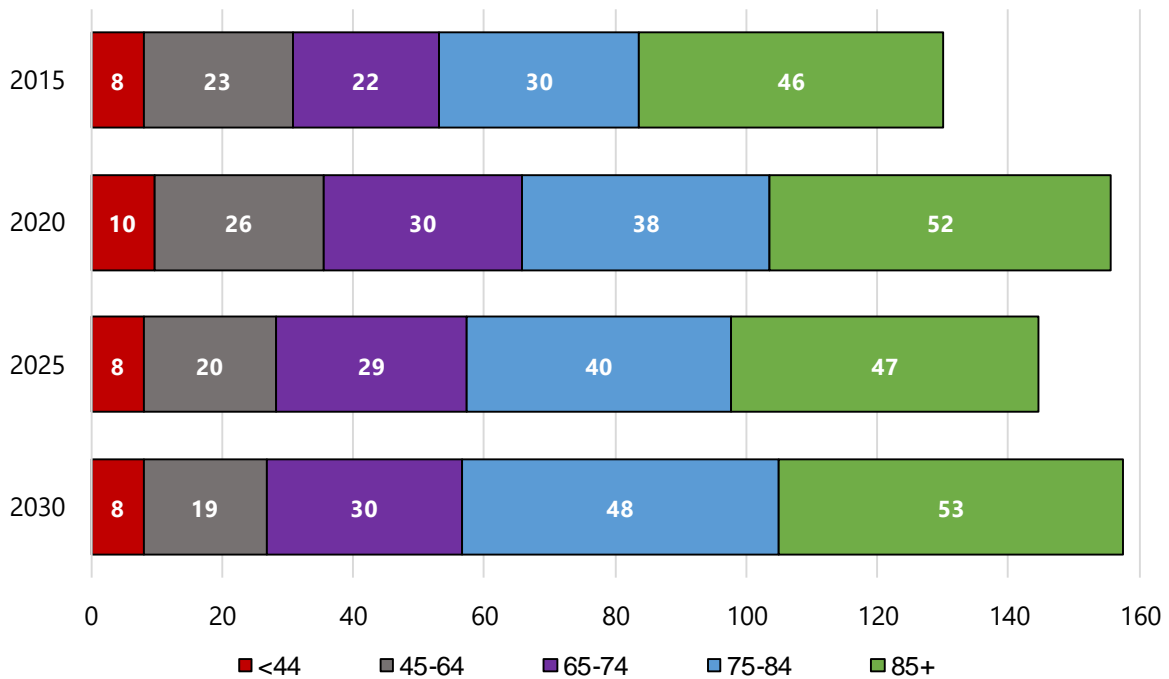
Source: The 2015 and 2020 data are from the U.S. CDC. The 2025 and 2030 data are IFO projections.

Decedent Trends

Figure 3.2 (next page) illustrates the gradual increase in the number of decedents from 2015 (130,100) through 2030 (157,600) in Pennsylvania with a spike in 2020 due to the COVID-19 pandemic. The figure separates decedents by age group. The total number of decedents in the age 75 and older groups is projected to increase from 2020 to 2030 due to the aging of the Baby Boomer cohort.

Table 3.3 (next page) displays each age group’s decedent rate for the same five-year increments as Figure 3.2. For example, in 2015, 4.7% of all state residents age 75 to 84 passed away. While the overall decedent rate is projected to increase slightly over time, that outcome is mostly due to the general aging of the population. Table 3.3 shows a significant reduction in the share of decedents for residents age 85 and older. The reduction is partially due to the large influx of Baby Boomers during the forecast period that reduces the median age and decedent rate for that age group.

Figure 3.2
Pennsylvania Number of Decedents (000s) by Age and Year



Note: Decedent counts from July 1st shown as calendar year (e.g., 2015-16 = 2015).

Source: The 2015 and 2020 data are from the U.S. CDC. The 2025 and 2030 data are IFO projections.

Table 3.3
Decedents as a Share of Population by Age Group and Year

	2015	2020	2025	2030
Age 0-44	0.1%	0.1%	0.1%	0.1%
Age 45-64	0.6	0.8	0.6	0.6
Age 65-74	1.9	2.1	1.9	1.9
Age 75-84	4.7	5.4	4.7	4.7
Age 85+	14.1	16.1	14.4	14.3
Total	1.0	1.2	1.1	1.2

Note: Decedent counts from July 1st shown as calendar year (e.g., 2015-16 = 2015).

Sources: The 2015 and 2020 data are from the U.S. CDC with calculations by the IFO. The 2025 and 2030 data are projections by the IFO.

Recent Migration Trends

Table 3.4 displays the U.S. Census Bureau’s estimate of net migration by states from July 2020 through July 2022. The data are displayed by net domestic and international migration separately. The U.S. Census estimates that Pennsylvania lost 12,200 in net domestic migration which was more than offset by a net 36,900 international migrants flowing into the state. The total net migration for Pennsylvania over the two years was an in-flow of roughly 24,700 residents, which ranks the Commonwealth 22nd across all states.

State	Dom.	Int'l.	Total	State	Dom.	Int'l.	Total
1 Florida	562.8	172.5	735.3	27 Iowa	-5.5	13.0	7.6
2 Texas	423.8	162.1	585.9	28 Vermont	6.0	1.4	7.4
3 North Carolina	204.3	36.4	240.6	29 West Virginia	3.3	2.5	5.8
4 Arizona	152.8	30.2	183.0	30 Wyoming	3.9	0.5	4.4
5 South Carolina	151.5	14.7	166.2	31 Oregon	-7.0	9.6	2.6
6 Georgia	116.9	37.4	154.3	32 New Mexico	-5.7	8.2	2.4
7 Tennessee	132.1	11.2	143.3	33 Wisconsin	-11.2	11.4	0.1
8 Idaho	80.0	2.5	82.5	34 Rhode Island	-4.8	3.9	-0.9
9 Alabama	56.3	6.4	62.7	35 Ohio	-36.8	33.4	-3.4
10 Oklahoma	53.1	7.9	61.0	36 Wash. D.C.	-10.3	6.3	-4.0
11 Nevada	46.2	13.8	60.0	37 Nebraska	-10.3	5.6	-4.7
12 Utah	42.6	7.5	50.0	38 Kansas	-12.4	7.6	-4.8
13 Indiana	21.3	21.6	42.9	39 North Dakota	-6.7	1.7	-5.0
14 Arkansas	35.6	4.7	40.3	40 Alaska	-9.7	3.2	-6.4
15 Montana	36.4	2.5	38.9	41 Mississippi	-9.2	2.2	-7.0
16 Missouri	21.8	13.9	35.8	42 Michigan	-38.0	25.9	-12.2
17 Washington	-19.0	51.5	32.5	43 Minnesota	-35.7	19.7	-16.0
18 Maine	28.9	3.5	32.4	44 Hawaii	-24.7	7.8	-16.9
19 Delaware	24.6	3.4	28.0	44 Massachusetts	-84.0	60.4	-23.7
20 Connecticut	5.5	22.5	28.0	45 Maryland	-62.8	32.8	-30.0
21 Colorado	11.1	14.3	25.3	46 New Jersey	-98.0	54.1	-43.8
22 Pennsylvania	-12.2	36.9	24.7	47 Louisiana	-75.0	11.3	-63.7
23 Virginia	-29.4	52.0	22.6	48 Illinois	-257.3	43.0	-214.3
24 New Hampshire	14.8	5.4	20.3	49 New York	-595.4	106.7	-488.7
25 Kentucky	13.2	6.2	19.4	50 California	-802.2	169.8	-632.3
26 South Dakota	14.5	3.9	18.3	-- United States	--	1,387.0	1,387.0

Note: Dom stands for domestic. Int'l stands for international. Rank based on total net migration from July 1, 2020 through July 1, 2022.

Source: U.S. Census Bureau. Vintage 2022 Population Estimates. Estimated Components of Resident Population Change.

The shaded states are border states and show that Pennsylvania recorded a larger net in-migration than all border states with the exception of Delaware. Southern states of Florida, Texas, North Carolina, Arizona and South Carolina recorded the largest net migration gains during the two-year period, bolstered by very strong net domestic migration and solid net international migration. Nationwide, the data show continued migration to southern states, likely the result of individuals moving to states with warmer climates and lower cost of living. The general domestic migration trends throughout the country showed movement from northern states to southern states.¹¹

¹¹ Historical migration data are not shown because Census data for 2010 to 2019 are based on 2010 Decennial Census figures while data from 2020 to 2022 on are based on 2020 Decennial Census figures. As a result, the migration rates are not directly comparable.

Focus: Labor Force Trends Among Older Adults

This section analyzes how demographic trends could impact the Pennsylvania labor force and highlights challenges policymakers will encounter as the state population continues to age over the next decade. A major challenge highlighted in recent years has been the strong growth of older adults while the working-age population contracts. This trend has long-term implications for various state economic metrics, notably the labor force participation rate (LFPR). The LFPR is published by the U.S. Bureau of Labor Statistics and represents the share of residents age 16 or older that work or actively seek employment. If the LFPR declines, then it suggests that less labor resources are available, which has negative implications for economic growth.

In general, older residents have much lower LFPRs. Therefore, as the state population continues to age, the overall LFPR will decline automatically if rates for specific age groups do not increase. **Table 4.1** presents data and average annual growth rates for the older adult population from 2020 to 2030. The older worker (age 55 to 64), retiree (age 65 to 74) and advanced age (age 75+) cohorts comprise the population of older adults in the Commonwealth. The forecast projects that the older worker cohort will contract (-2.1% per annum), while the retiree (1.0%) and advanced age cohorts (3.2%) expand. By 2030, about 35% of all older adults in the Commonwealth will be part of the retiree cohort.

Two primary factors motivate these trends. First, the Baby Boom generation will continue to transition into the retiree and advanced age cohorts. For 2022, Baby Boomers comprised the largest share of Pennsylvania’s population distribution (22.7%). Since younger generations comprise a relatively smaller share compared to the older adult population, there will be fewer working-age residents compared to retiree and advanced age residents. Second, healthcare advancements should continue to extend resident longevity.

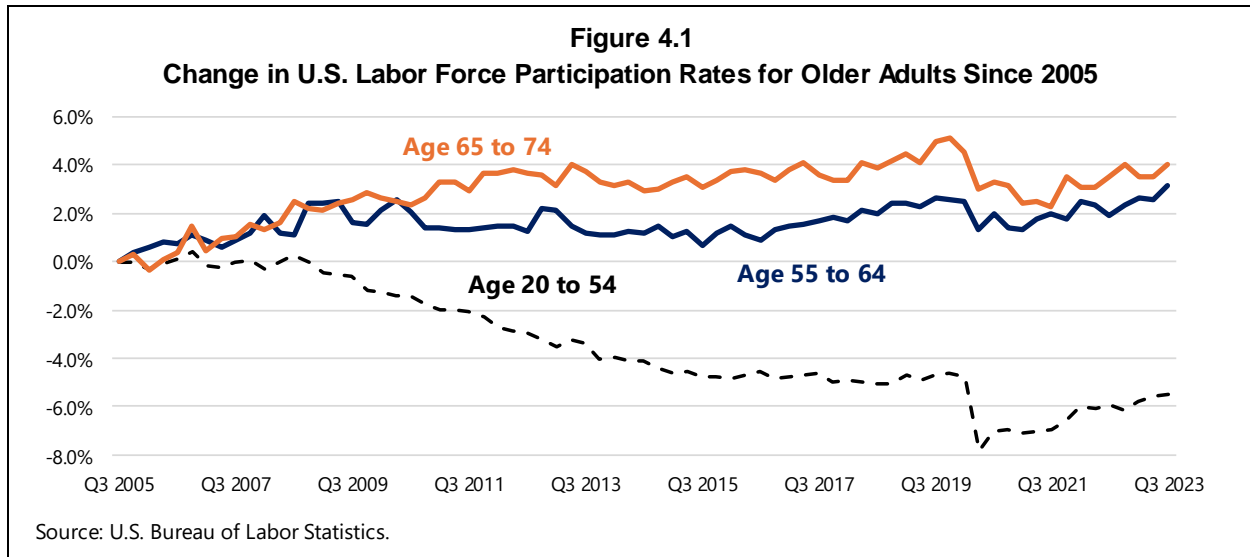
Table 4.1
Older Adult Population Projections for Pennsylvania

Age	2020	2025	2030	10-Year Change	AAGR '20-'30
55 to 64	1,826	1,669	1,483	-343	-2.1%
65 to 74	1,411	1,548	1,564	153	1.0
75 to 84	705	868	1,031	326	3.9
85+	<u>322</u>	<u>326</u>	<u>372</u>	<u>50</u>	<u>1.5</u>
Total	4,263	4,412	4,450	187	0.4

Note: AAGR is average annual growth rate.
Source: U.S. Census Bureau. Estimates and projections by the IFO.

Figure 4.1 displays the total change in LFPRs for the older worker, retiree and age 20 to 54 cohorts, relative to 2005 (third quarter).¹² For that year, the LFPR for all older adults (age 55+) was 37.3%, and the working-age LFPR (age 20 to 54) was 80.4%. Since then, the working-age LFPR has declined 5.5 percentage points, while the older adult LFPR has increased 1.4 percentage points, with those age 65 to 74 driving that trend. This outcome implies that a higher share of older adults are working or seeking work than was the case for previous generations.

¹² Figure 4.1 uses LFPR estimates for the U.S. and not Pennsylvania because the national data include (1) many more data points, and therefore, the rates have narrower confidence intervals, (2) detail for both the age 65 to 74 and age 75+ groups and (3) recent data for 2023. Overall, LFPR trends for Pennsylvania show a less dramatic reduction in the LFPR for those age 20 to 54 and a more dramatic increase for those age 65+.



Given the projected expansion of the age 65 to 74 cohort (see Table 4.1) and the strong growth in the LFPR for that cohort (see Figure 4.1), a relevant issue is whether future labor demand will occur in industries and occupations in which those residents could work, if desired. To examine this issue, **Table 4.2** (next page) presents the share of employment in each industry for three age cohorts: (1) residents age 19 to 54, (2) residents age 55 to 64 and (3) residents age 65 to 79. The two rightmost columns display detail for those age 65 to 79, including the number employed by sector and the relative share of those age 65 to 79 who work and are employed by a specific sector. (These data exclude self-employed individuals and independent contractors.) For these workers, the data reveal that:

- The arts-entertainment (11.4%), other services (10.5%), retail-wholesale and education (both 9.9%) have a relatively high share of workers age 65 to 79. (See third column of data.) Many of those jobs are part-time or have limited physical demands.
- For those working, residents age 65 to 79 were much more likely to work in the retail-wholesale trade (17.2%) and healthcare and social assistance (17.6%) sectors (see final column). These data show the sectors that older workers prefer, which may be due to flexible and part-time hours (retail) and limited physical demands (social assistance/counseling). By contrast, manual labor employment in construction (3.8%) or small sectors with minimal employment opportunities (arts-entertainment, 2.5%) employ a relatively small proportion of residents age 65 to 79 who work.

Table 4.2
Pennsylvania Labor Market Data by Age and Sector

	% Employment by Age Group			Age 65-79 Employment	
	19-54	55-64	65-79	# (000s)	Share
All Industries	73.3%	18.9%	7.8%	439.8	100.0%
Construction	74.8	18.9	6.4	16.9	3.8
Manufacturing	69.2	24.0	6.8	38.2	8.7
Retail and Wholesale Trade	71.9	18.2	9.9	75.7	17.2
Transport and Warehouse	72.1	18.9	9.0	26.0	5.9
Financial and Real Estate	72.6	20.7	6.6	22.0	5.0
Professional and Technical	75.9	17.2	6.9	26.5	6.0
Admin and Waste Management	75.7	16.2	8.1	25.6	5.8
Education (excludes local SD)	71.2	18.9	9.9	17.8	4.1
Healthcare-Social Assistance	73.6	18.8	7.6	77.6	17.6
Arts-Entertainment	74.6	14.1	11.4	11.0	2.5
Accommodation-Food Service	82.3	11.7	6.0	22.6	5.1
Government	73.3	18.9	7.8	39.9	9.1
Other Services	70.5	19.0	10.5	20.2	4.6
All Other	74.5	19.1	6.4	19.9	4.5

Note: Data not seasonally adjusted. Figures for 2022 Q3. Excludes self-employed, independent contractors and workers under age 19. Workers age 80+ removed from employment totals due to nominally low labor force participation.

Source: Quarterly Workforce Indicators, U.S. Census Bureau.

- This page intentionally left blank. -

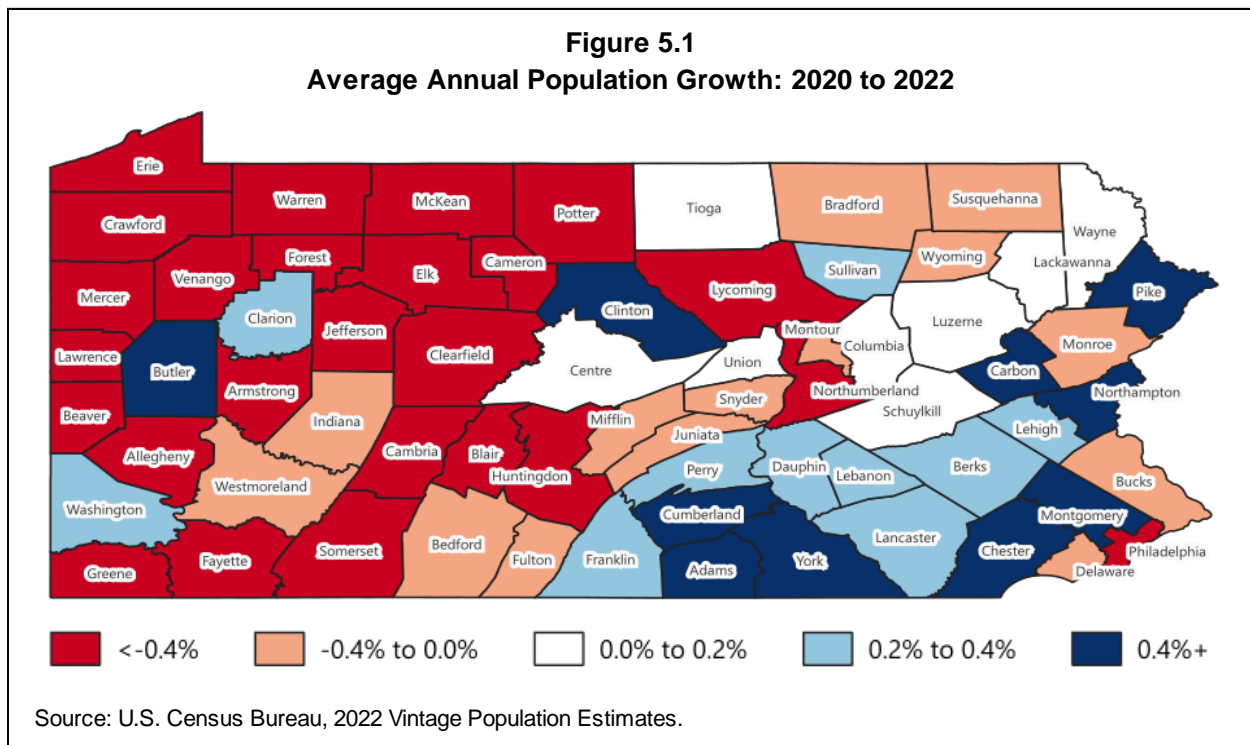
Regional and National Population Trends

The following series of maps display notable, longer-term demographic trends at the county and national levels. Although state-level data are useful in the analysis of demographic trends, geographic detail provides policymakers context for these data and may assist in the development of policy solutions appropriate to certain regions of the state.

Pennsylvania County Population Growth

Figure 5.1 presents the average annual population growth rates for all counties in Pennsylvania from the 2020 to 2022 U.S. Census Bureau population estimates. The following trends were observed:

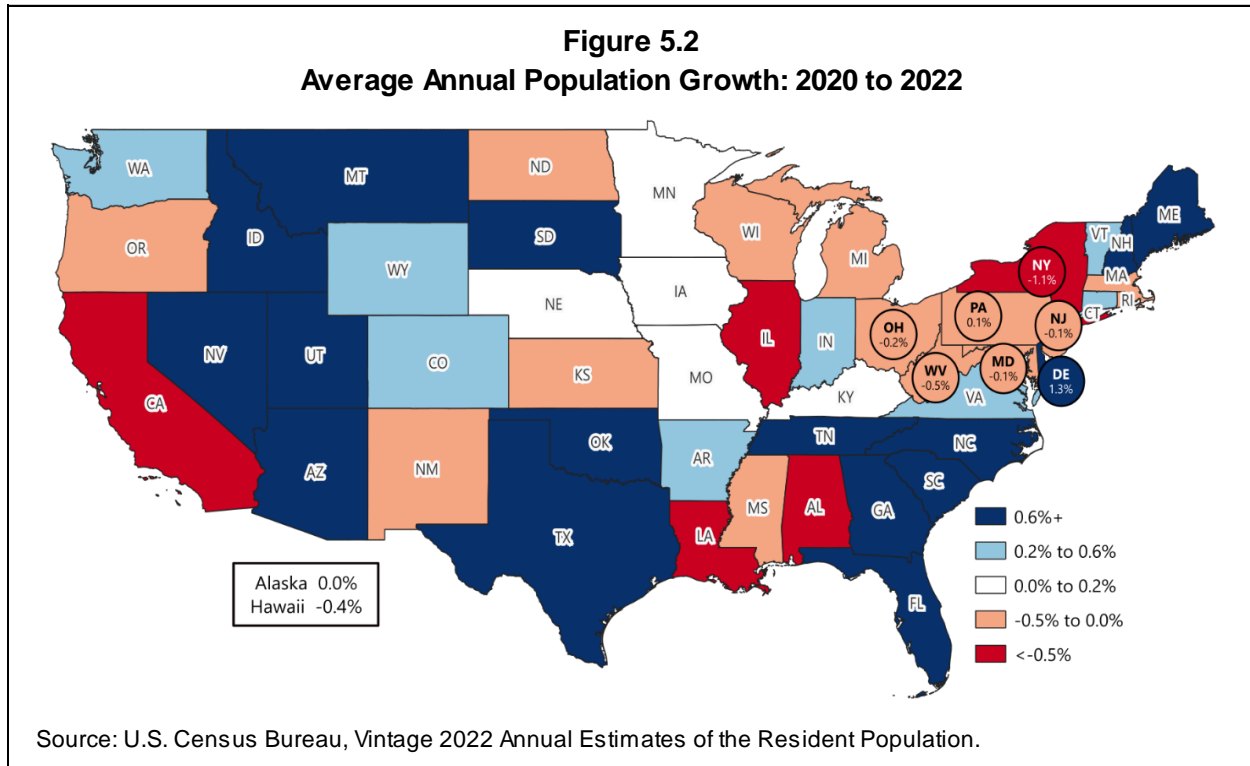
- Less than half of Pennsylvania counties recorded population growth. Four counties (Pike, Cumberland, Adams and Chester) recorded average annual population growth greater than 1.0%.
- The South Central (0.6% average growth per annum) region grew fastest, driven by Cumberland (1.6%), Adams (1.1%) and York (0.5%) counties.
- The Northern region recorded the highest negative average annual growth (-0.5%), led by Forest (-2.4%) and Cameron (-1.3%) counties. Only three counties in the region (Clarion, Sullivan and Tioga) recorded population growth.



Population Growth Across States

Figure 5.2 displays average annual population growth across all states based on 2020 to 2022 population estimates. The following trends were observed:

- Pennsylvania (-0.1% per annum) and all border states contracted over the period: New Jersey (-0.1%), Ohio (-0.2%), West Virginia (-0.5%) and New York (-1.1%).
- The Northeast region (-0.3% per annum) recorded the strongest negative average annual population growth. The Midwest (-0.1%) and West (-0.1%) regions also contracted.
- Nineteen states (includes Pennsylvania) recorded negative average annual population growth.
- The Southwest (Arizona, New Mexico, Oklahoma and Texas) recorded the strongest average annual population increase over the period (1.2% per annum) due to population growth in Texas (1.4%) and Arizona (1.2%).
- Population growth in the Southeast region (0.8% per annum) was primarily driven by strong average annual growth in Florida (1.5%), South Carolina (1.5%) and North Carolina (1.2%).



Appendix

**Table A.1
Pennsylvania Population Projections 2020 to 2030**

Age	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
0-4	689	678	671	665	661	657	657	654	652	650	648
5-9	729	727	722	718	710	701	690	683	677	673	669
10-14	779	770	757	746	741	739	738	735	731	723	714
15-19	838	843	833	823	831	840	834	823	812	805	803
20-24	817	843	841	857	847	824	808	804	797	806	813
25-29	836	823	807	796	791	801	822	835	851	842	820
30-34	869	875	876	871	862	847	830	815	804	799	809
35-39	818	827	834	846	862	875	882	884	880	870	855
40-44	754	772	785	800	809	818	829	838	849	865	878
45-49	765	734	721	723	733	747	766	781	795	805	814
50-54	837	832	816	797	773	746	717	706	709	718	733
55-59	915	891	865	840	818	805	801	788	769	745	720
60-64	911	912	901	888	877	863	840	818	794	773	761
65-69	784	799	814	830	838	840	843	834	822	812	799
70-74	627	658	655	666	682	702	716	731	744	751	753
75-79	420	426	467	486	509	534	560	552	565	579	595
80-84	284	287	296	314	324	331	336	375	385	406	424
85-89	194	190	186	188	190	190	195	203	219	223	227
90-94	95	94	92	93	93	94	94	95	96	97	96
95-99	28	28	28	30	32	34	34	34	34	34	36
100+	<u>4</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>9</u>	<u>9</u>
Total	12,994	13,012	12,972	12,981	12,988	12,995	12,998	12,998	12,994	12,985	12,974

Note: Thousands of residents.

Source: Data from 2020 to 2022 from U.S. Census Bureau 2022 Vintage Population Estimates. 2023 through 2030 are projections by the IFO using data from the U.S. Census and U.S. CDC.